it had half passed over the limb of the sun, was visible, reminding one of the dark part of the new moon on a clear night. I may say that the whole appearance of internal contact was quite unexpected, and the absence of the black drop puzzled every observer. External contact was observed, I hear, almost simultaneously by all observers, a point of the utm ost importance when the degree of ellipticity of the planet has been determined from measurements of her diameter."

NOTES

THE Germans, we are glad to see, have finally decided to send out a second expedition to the east coast of Greenland. It is to consist of two steam-vessels, of 300 tons burden, each manned by thirty men; one to explore Greenland, while the other advances to the north pole. The estimated cost is about 50,000*l.* sterling, and the expedition is to leave in June 1875 or June 1876, according as the money can be got together. There is no hint that the German Government is to lend assistance, though we hope it will do something, after such a good example has been set by our own Government. It would be a splendid and healthy outlet for national rivalry to have these two expeditions start this year, each doing its best to win the Arctic campaign, and striving to be the first to unfurl its particular national flag over the long-fought-for goal. At all events, during the next two or three years we ought to hear of some fine conquests having been made in the far north. The preparations for our own expedition are steadily progressing. Commander Markham, R.N., arrived on Tuesday at Portsmouth.

ONE of the principal articles in this month's *Geographical Magazine* is on Lieut. Cameron's recent discoveries in the Tanganyika region. The writer justly rates Lieut. Cameron's work as of the highest importance, and we earnestly hope that the appeal of the Royal Geographical Society for subscriptions to enable Cameron to complete his work will be liberally responded to. Already 1,494*l.* have been subscribed, including 500*l.* from the Geographical Society; but of this, 544*l.* will be swallowed up by expenses already incurred, so that there is really only 950*l.* available. This, "it is confidently hoped, will be largely increased as soon as the people of England are fully aware of the necessities of their young countryman in the heart of Africa, and of the glorious work that he is bravely attempting to do, alone and single-handed."

DR. ALLCHIN will give the course of lectures on Comparative Anatomy and Zoology this session at University College, London, pending the appointment of a successor to the late Prof. Grant. The introductory lecture will be delivered to-day, at 4 P.M.

MR. BOWDLER SHARP, of the British Museum, delivered a lecture on "The Birds of our Globe," on Tuesday, January 5, in the private music-room at Mr. N. Holmes's residence, Primrose Hill. The lecturer, commencing with the "Accipitres," or birds of prey, gave a concise description of the various families and genera of birds, terminating, according to modern classification, with the "Struthiones," illustrating at the same time the different groups by an elaborate series of paintings specially prepared for the occasion by Herr Keulemans, the well-known ornithological artist.

WE have received a foretaste of the forthcoming new edition of the "Encyclopædia Britannica," in the shape of a separate reprint of Mr. A. R. Wallace's carefully written article on "Acclimatisation." After an examination of a considerable number of instances, Mr. Wallace concludes: "On the whole, we seem justified in concluding that, under favourable conditions, and with a proper adaptation of means to the end in view, men may become acclimatised with at least as much certainty and rapidity (counting by generations rather than by years) as any of the lower animals."

THE great hurricane which swept over Hong Kong on the 22nd and 23rd of September last, and to which we referred at length last week, appears, from official reports, to have caused considerable damage in the Government Gardens. Mr. Ford, the superintendent, reports that the largest trees suffered the most severely, several of the oldest and largest being entirely destroyed. Many other trees, although not destroyed, were severely damaged, having nearly the whole of their branches broken off, while many which were thus damaged, but which had not their roots broken or strained, will, in course of time, produce fresh branches and foliage. A considerable number of smaller trees and shrubs were entirely destroyed, having been broken off close to the ground, while others were blown over and a great portion of their roots so much exposed to air and light as to threaten their ultimate destruction. Operations were at once commenced for the preservation of as many of the trees and shrubs as there was any prospect of saving, and the greater part of them were replanted and protected by supports. The flower-pots containing plants in various parts of the gardens were broken in great numbers, and the plants for the most part much disfigured. In the nurseries, likewise, the plants in pots were thrown out, but no serious damage was effected. With regard to trees in different parts of the town, which come under the Forest Department of Hong Kong, Mr. Ford says: "I have observed that in nearly all cases where trees were blown down in the typhoon of September 1871, and those trees were again set upright and have continued to grow up to the late typhoon, they have again fallen, and in several cases are this time entirely destroyed; thus proving, as a general rule, that when once a tree suffers so severely as to cause its prostration, little reliance can be placed on that tree ever afterwards continuing or becoming a sound and healthy one." In the Surveyor-General's Report to the Colonial Secretary of Hong Kong on the damage caused by this hurricane, it is regretted that no record remains of the pressure of the wind, owing to the meteorological station connected with the Government Hospital being swept away by its force. It is further said, however: "That the island was not many miles distant from the focus of the cyclone is proved not only by the intensity of the wind, but by a feature known to exist only within such a focus, namely, the abrupt intervals of calm during the height of the gale. These lulls were instantaneous, often lasting as long as four or five minutes; and, alternating with the most violent gusts, equally sudden, the conjoint action of the two became, as it were, that of a battering ram."

MANY experiments have been tried in France to test the effects of cold on railway axles. Many engineers suppose that accidents to wheels do not result from any diminution of tenacity of the metal, but merely from its losing all its elasticity owing to the frost hardening the surface of the earth. A fact which can be adduced as a strong argument in favour of that theory was observed by the inhabitants of Montmartre during the last period of frost. The passing of the trains which run so frequently through the Batignolles tunnel at a distance of half a mile was heard by them day and night, which is never the case in ordinary circumstances. As soon as the thaw set in the trains ceased to be heard; the earth having resumed its former elasticity, the sounds were dissipated as before. It has been observed by French railway engineers that thaws are apt to lead to the breaking of axles and chains. The elasticity being only partially recovered, many shocks affect the trains when running at a fast rate, and are apt to lead to catastrophes.

MR. W. PHILLIPS, of Shrewsbury, proposes to publish, under the title of "Elvellacei Britannici," dried specimens of the larger

ascomycetous fungi. To persons forming collections of our indigenous fungi, Mr. Phillips's fasciculi will be useful, since similar collections have hitherto principally comprised only the *Hymenomycetes*. Mr. Phillips will be assisted by various well-known mycologists, and he proposes to issue a very limited number of copies at twelve shillings each fasciculus of fifty species.

M. Amédée Guillemin has published through Hachette a very interesting work on Comets, profusely illustrated. All the modern theories are discussed, from Descartes to Schiaparelli, a number of traditions and stories connected with comets being also introduced.

WE omitted to mention in last week's notice of the anniversary meeting of the French Academy the speech delivered by M. Dumas on De la Rive. It is a part of the duty of the perpetual secretaries to deliver such *éloges* at each anniversary meeting. That duty has been performed by each perpetual secretary from Fontenelle to our days, and the collection of these *éloges* is an important part of the Academical publications. M. Bertrand is at present engaged in preparing the *éloge* of M. Elie de Beaumont, which will be delivered in 1876.

A COMMISSION, nominated by the Geographical Society of Paris, and composed of Admiral Fluriot de Langle, MM. Delesse, Charles Grad, H. Farry, and Jules Girard, has just published some instructions to navigators to aid in their study of the physical geography of the sea. These instructions, which the Society sends gratuitously to everyone who is willing to turn to account, in the interest of science, his stay on board ship, point out, in a style sufficiently precise and elementary to come within the comprehension of all, the principal points on which observations should be made, and the best methods to be adopted for collecting useful particulars.

AT St. Peter's College, Cambridge, on April 6, there will be an examination for a Natural Science Scholarship. The subjects of examination will be botany, chemistry and chemical physics, geology, and comparative anatomy and physiology. No candidate will be examined in more than two of the above-mentioned subjects. Applications to become candidates must be made on or before March 29 to the Rev. J. Porter, tutor of the College, who will give all necessary information.

BY the death of Prof. William Macdonald, of St. Andrew's University, the chair known as that of "Civil and Natural History" becomes vacant. Dr. Macdonald held it for twenty-four years. The post has from the first been practically a sinecure, and almost seems to have been instituted for the sake of the professor. We wonder if the Senate of St. Andrew's will allow their University to be befooled by the appointment of a successor to Dr. Macdonald in this unique chair of "Civil and Natural History."

WE are glad to see that it is intended to form a society at Watford, having for its object the investigation of the meteorology, geology, botany, and zoology (including entomology, ornithology, &c.) of the neighbourhood, and the dissemination amongst its members of information on natural history and microscopical science. The evening meetings of the society will be held (by permission) in the rooms of the Watford Public Library, and during the summer months field meetings will also be held. It is proposed that the annual subscription be ten shillings, without entrance fee. The names of ladies and gentlemen willing to join the society will be received by Dr. Brett, Watford House, by Mr. Arthur Cottam, St. John's Road, Watford, and by Mr. John Hopkinson, jun., Holly Bank, Watford. It is hoped that a sufficient number of names will be received within the next few days to warrant a meeting being called to found the society in the course of the present month.

THE Institution of Civil Engineers seems to be one of the most prosperous of our scientific societies. On its books on Nov. 30, 1874, were 2,130 members; its income for the past year was upwards of 10,000*l.*, and its investments amount to nearly 33,000*l.*

A RARE phenomenon, says the *Malta Times*, occurred in the forenoon of Monday, the 21st ult. During a strong wind from the south-west, which had prevailed for two days previously, the sea suddenly rose several feet and flooded the moles and roads surrounding the harbours, causing four or five steamers, moored between the Custom House and Calcara Rise, to snap their stern hawsers like packthreads, and carrying away boats that were hauled ashore in the French and other creeks. The sea then receded as suddenly as it rose, leaving portions of the bottom of the harbour exposed, upon which men and boys might be seen collecting fish and other marine animals that had been left aground by the retiring water. Shortly afterwards the sea resumed its ordinary level. Similar phenomena have been noticed occasionally during the course of many years.

M. W. DE FONVIELLE has published a small volume, "Le Métre International définitif," giving an account of the determination of the metre and the negotiations relating to it from 1789 to 1874.

THE *Daily News* of Monday has a letter from its correspondent on board the *Challenger*, giving a few details in addition to those contained in the recent *Times*' letter. From Hong Kong the ship was to return to Manila and other places, as far as New Guinea, then make for Yokohama, Japan.

THERE was a slight shock of earthquake at Malta on Friday last, at 1 P.M.

THE additions to the Zoological Society's Gardens during the past week include two Razor-billed Curassows (*Mitua tuberosa*) and a Yarrell's Curassow (*Crax carunculata*) from South America, presented by Mrs. A. E. Nash; seven Golden Agoutis (*Dasyprocta aguti*), from Guiana; five Guira Cuckoos (*Guira piririgua*) from Pará; an Ani (*Crotophaga ani*), two Orinoco Geese (*Chenalopex jubata*), two Red-tailed Guans (*Ortalida ruficanda*), a Spotted Cavy (*Cœlogenys paça*), and a Collared Peccary (*Docotyles tajacu*), all from South America, purchased.

THE PRESENT CONDITION OF THE ROYAL SOCIETY*

(*Extracted from the President's Address at the Anniversary Meeting.*)

Committee of Papers.—The strength of the Society being represented by its publications, the Committee of Papers is the one whose functions are unquestionably the highest and most onerous, as they are the most closely scrutinised by the Fellows and the public.

Every member of the Council is included in this committee, which meets after almost every Council meeting, and no part of its duties is at present performed by a sub-committee. It appears to me to be very doubtful whether this arrangement, even if the best, can last, owing to the greatly increased number of papers now communicated and their augmenting bulk, and to the value of their contents being less easily estimated as the subjects of scientific research become more specialised. As it is, in the majority of cases but few of the members present can judge of the merits of many of the papers; and it is not easy after a protracted Council meeting, and one occupied with promiscuous business, to fix the attention of a large committee upon subjects with which but few members present may be familiar. It is true that the committee is aided in all cases by the written opinions of careful and impartial referees, and by the special attainments of our secretaries, and that it is most desirable that the sometimes divergent opinions of these should be weighed by

* Continued from p. 178.